(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



. I MATTE BILLATE IN BILLIE HEIN BEIN BERN BIEN HIN BENN BERNE BILLE BILLE BILLE BILLE BILL

(43) International Publication Date 15 January 2004 (15.01.2004)

PCT

(10) International Publication Number WO 2004/006565 A3

(51) International Patent Classification⁷: H04N 9/04

G06T 5/20,

(21) International Application Number:

PCT/IB2003/002656

(22) International Filing Date: 24 J

24 June 2003 (24.06.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02077689.4

4 July 2002 (04.07.2002) EP

- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N. V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): JASPERS, Cornelius, A., M. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (74) Agent: SCHOENMAKER, Maarten; International Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

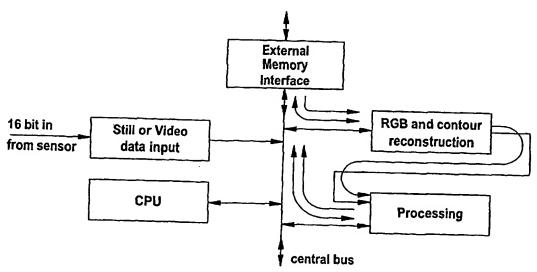
Published:

with international search report

(88) Date of publication of the international search report: 4 March 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR SIGNAL PROCESSING, COMPUTER PROGRAM PRODUCT, COMPUTING SYSTEM AND CAMERA



(57) Abstract: A reconstruction method based on a white-compensated luminancereconstruction and using filter weights referred to as smartgreen-parameters is proposed. An aliasing free luminance signal, even at the multiples of the sample frequency and in case of a camera without optical low pass filter is achieved. Moreover this white-compensated luminance-signal is free of signal distortion. The proposed method allows a suitable low pass filter to be added or combined and a is particular well suited to implement a variety of abasing free color- and contour-filters. The RGB color signals are reconstructed using filter weights which can be chosen as a function of the heaviness of the sensor matrix and of the optical transfer of the camera.